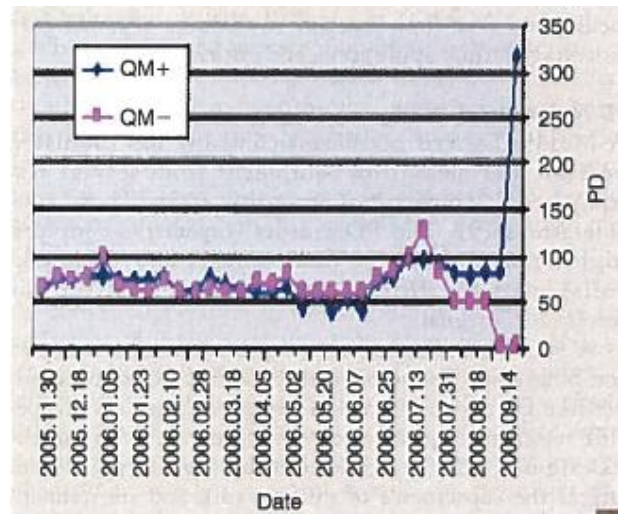




# CONTAMINATION IN CRITICAL MOTOR



**Figure 1. Trending**

**Company:** Middle Eastern petroleum company  
**Motor Ratings:** 15.6 MW, 13.8 kV  
**Manufacturer:** Unknown  
**PD Couplers:** BUS EMCs (80 pF sensors)  
**Instrument:** Trac unit (continuous monitor)

**Details:**

“...Figure 1 shows an example of online PD data taken over a nine-month period from a 13.8 kV, 15.6 MW (21,000 hp) machine, using a fixed monitoring unit. The plot shows very little change in PD measured roughly twice per month between November 2005 and September 2006. A significant increase in positive predominance of PD (roughly, a tripling of the pulse magnitude) was observed in the very last measurement. Based on this, a visual inspection of the endwinding was recommended, which revealed significant contamination in the endwindings...”

*From M.K.W. Stranges, S. U. Haq & A. O. Vouk, “Monitoring Stator Insulation in Critical Motors” in IEEE Industry Applications Magazine, 2014, pp 50-55.*